To explore and reflect on the mental health and well-being of children engaged in one to one singing in music mentoring sessions.
Emily Foulkes

- Pgcert / MA in Applied Professional Practice – Voice Pedagogy with a specialism in Singing for Health and Well-being

- Director, Practitioner and Trainer for Cymaz Music – small charity in Cornwall

- Cornwall Rep for Arts and Health ECRN (Early Career Research Network)

- Freelance Practitioner, Trainer, Consultant and Researcher

- Trauma and Mental Health Practitioner and Trainer
Background

• Cymaz Music has almost 20 years of experience of delivering and managing inclusive music programmes which aim to support education and learning and promote health and well-being

• A one to one Music Mentoring programme is tailored to the individual child/young person working towards shared goals (musical, personal, social). Therapeutic but not Music Therapy
Justification

• Music Mentoring programme developed by Cymaz Music built on years of experience, learning, reflection and evaluation but no in depth research to underpin practice

• Singing is claimed to promote positive mental health (Clift et al, 2010; Welch 2011) but studies are mainly about adults and groups

• Trauma and Mental Health Informed approaches and knowledge may give way to a new pedagogical practice which may reach children and young people who may not engage in traditional singing opportunities
Methodology

• Mixed Methods – Baseline and follow up using Motional, Reflective Journal and brief questionnaire with participants

• Insider Researcher

• Ethical, Data Protection and Safeguarding considerations covered

• Triangulation of data and reflecting on qualitative and quantitative data to draw out themes

• 10 sessions of one hour with 5 young people (purposive sampling) in two schools
Literature Review: Singing and Mental Health

• In the last two decades there has been a growing amount of evidence to suggest that singing, particularly in a group, may support positive mental health (Clift et al, 2010; Clift et al, 2018)

• A study of the National Sing Up programme of nearly 4,000 children found that singing improved confidence and self-esteem in children (Welch et al, 2011)

• From 22 projects across England - Singing can promote feelings of well-being, particularly for vulnerable/disadvantaged children and young people and singing one to one or in a small group may be more appropriate until they have gained more confidence. (www.curee.co.uk/node/2390)
Literature Review: Evolution of Voice and link to emotion

- Singing before talking (Mithen, 2006; Brown 2000; Fitch 2006; Levitin 2008)
- Voice reveals inner emotional states (Juslin & Laukka, 2003)
- Voice for survival and communication (Geissmann, 2000)
- Singing promotes feelings of trust and bonding (Chandra & Levitin, 2013) and releases endorphins (Smith et al, 2010)
- Voice evolved very closely with hand gestures (Castiello et al, 2006)
- Voice and communication system is built on Motherese, the use of voice/prosody between Mother and infant (Ferguson & Snow, 1977; Apicella et al, 2013)
- Laughter, whimpering, crying out, sighing and yelling are emotionally triggered vocalisations rooted in limbic system (Brown, 1996)
- Social vocalisations can release oxytocin in humans (Seltzer et al, 2010)
Literature Review: Impact of Adverse Childhood Experiences

Adverse Childhood Experiences are a leading determinant of the most common forms of physical illness, mental illness and premature death (Felitti et al, 1998, 2009)

The impact of trauma, over time, can result in poor physical and mental health, as the build up of toxic stress is held in the body. Unresolved trauma is the root cause of anxiety and depression (Van der Kolk, 2014)
Literature Review: Impact of Adverse Childhood Experiences

High levels of toxic stress/Cortisol – likened to PTSD levels in soldiers returning from war (Perry 1994)

Poor frontal lobe functioning – affecting abilities to learn, focus, concentrate, to feel connected with the body and to feel empathy (Dawson et al, 1992, Carrion & Wong, 2012)

Over Active (Hypervigilant) Social Defence System, constantly alert for signs of threat - ‘neuroception’ (Porges S, 2011)

Amygdala (primitive brain) is triggered more easily, leading to production of stress hormones, resulting often in uncontrollable actions including poor behaviour, acts of rage and violence (Bik & Nelcon, 2016)
Literature Review: Trauma Informed

Adopt Panskepp’s ‘Affective Neuroscience’ model to inform practice and actively develop Pro Social Systems (Panskepp & Biven 2012)

- PLAY (Oxytocin, Dopamine)
- SEEKING (Dopamine)
- CARE (Oxytocin)

Underpin practice with PACE (Huges D & Baylin J, 2012)

- PLAY
- ACCEPTANCE
- CURIOSITY
- EMPATHY

Being sensitive to ‘felt meanings which flow in the other person’ (Rogers, 1980, pg 142)
Profiles of the participants

CHILD A
Girl in Year 6. 10/11 ACEs. Living with Grandparents and half sibling on SGO (Special Guardianship Order). Intelligent and described as highly observant, hyper vigilant.

CHILD B
Girl in Year 6. 10 ACEs. Living with Grandparents on SGO. Mother is in prison. Exhibits distress, frustration and difficulty with focus.

CHILD C
Girl in Year 6. 10/11 ACEs. Living with Grandparents on SGO. Described by school staff as disruptive, impulsive, loud and unable to focus.
Profiles of the participants

**CHILD D**
Girl in Year 8 going into 9. Parents are separated. Lives with Mum, stepdad, younger half brother and shares a bedroom with older sister. Described as highly anxious, detached and disconnected.

**CHILD E**
Boy in Year 7 going into 8. Lives with parents and older brother. Father reportedly has disabilities and was injured in a stabbing. This boy and his brother are possibly young carers. Described as a worrier with low self-esteem and ability to focus and concentrate.
Quantitative Findings

Pro Social Systems

Overall total increase 28.6%

CARE increased by 1.6% overall

SEEKING increased overall by 14.6%. Increases for four children and remaining level for Child A.

PLAY increased overall by 15.6% with increases for all children, the most for Child E, from 45% to 78%.
**Quantitative Findings**

**Social Defence Systems**

**RAGE**
Increased by 6.2%, despite lower levels at baseline than the other social defence systems. Reduced for Child E from 50% to 35%.

**FEAR**
Reduced for 4 participants and remains level for Child B. Decreases of 17% for Child C and Child E. Overall 10.8% reduction.

**PANIC/GRIEF**
Overall 7.8% reduction. Increase for Child A, remains level for Child B and reductions for Child C, D and E of more than 10% each.

The overall total decrease was 12.4%
Quantitative Findings

Overall

- **5.8%** improvement in handling stress
- **0.4%** improvement in thinking and concentration
- **11.6%** improvement in confidence & self-esteem
- **6.2%** improvement in interpersonal skills
- **6.8%** improvement in Emotional Literacy

![Bar chart showing improvements in various executive functions for different children.](chart.png)
Quantitative Findings

Participant Feedback

**Enjoyment of sessions**
- Don't Enjoy
- Enjoy a little bit
- Enjoy a lot
- Highlight of the week

**Feeling safe**
- Not at all
- A little bit
- A lot
- My safest place

**Feeling listened to**
- Not at all
- A little bit
- A lot
- Extremely

**Voice development**
- Not at all
- A little bit
- A lot
- Extremely
Quantitative Findings

Participant Feedback

Development of ideas

Better able to manage emotions
Quantitative Findings

Allocation of time

- Play
- Other Arts
- Breathwork
- Composition
- Improvisation
- Music (Instruments)
- Movement
- Singing
- Voice work
- Taking
Discussion

Theme 1. Voice for Expression vs Singing for Regulation

- Examples of **regression to baby like voices**, suggesting missed milestones in terms of building attachments with a primary care giver and a lack of loving care provided in early life (*Bowlby, 1988*)

‘She was pretending to be a baby left on my doorstep. In role play, often her deeper traumas come to the surface. This role play went on for some time and she remained curled up in the blanket behaving like a baby.’ Perhaps craving the level of care she missed out on as an infant.

- Expression of PANIC/GRIEF through vocal sounds akin to ‘**Distress Vocalisations**’ experienced in separation from the primary care giver (*Ainsworth 1982*)
Discussion

Theme 1. Voice for Expression vs Singing for Regulation

• Expression of **RAGE** and **anger** through voice was evident in **spontaneous** and non cognitive expression as well as through **more cognitive responses**

Suspect that the increase in the RAGE system is closely aligned with a boost in oxytocin, increased confidence and therefore more assertiveness in expressing anger. Panksepp’s hypothesis.
Discussion

Theme 1. Voice for Expression vs Singing for Regulation

• The voice can incite and be an indicator of joy, connection and creativity which comes from promoting the pro social systems and associated brain chemicals

• Music can promote the relaxation response (Thompson & Weiyi, 2015) and help with regulation (of emotions/stress response)

• Singing promotes vagal tone, through the extension of the exhalation and use of melodious voice (Porges, 2011) which promotes parasympathetic nervous system response – calming the stress response

• Singing can provide opportunities to express emotions and build connection through individualised compositions/improvisations

‘She took one of the animals away to look after over half term and told me that she took it to Chester Zoo – we made up a song about going to Chester Zoo. When I saw her with her Nan the next day, she was still singing this song!’ (Child A)
Discussion

Theme 2. Importance of Play, Playfulness and Co-creation

Improvements in the PLAY system were seen in all children in the Motional results. It was the most common activity in the sessions.

Relational play can be far more effective in supporting a positive attachment than just talking (Gaskill & Perry, 2014)

Sessions involved spontaneous play, child led exploration and musical games, which all trigger the PLAY system (Panskepp & Biven, 2012; Bratton et al, 2001; Bratton et al, 2005)
Discussion

Theme 2. Importance of Play, Playfulness and Co-creation

We are **hard wired to play** *(Panksepp & Biven, 2012)* and it is often the way we can enhance our relationship with others *(Spinka et al, 2001)*

**Laughter is rooted in our primal responses** to joy and is a vocalisation which can boost positive brain chemicals and build frontal lobe neural connections *(Panksepp & Biven, 2012; Porges 2011)* flooding the brain with positive chemicals, like oxytocin and dopamine *(Spinka et al, 2001; Panksepp & Biven, 2012)*

‘*We did voice work with a straw, using a cup of water. He did this really well and had a bit of fun with it. It was playful and there was laughter. It was nice to see him express himself and let go through play.*’ *(Child E)*

Straw phonation made popular as a vocal exercise by Ingo Titze (1996)
In order for PLAY to happen, a child must feel regulated and safe, in an environment of attunement and enjoyment (Gaskill & Perry, 2012).

Play can actively engage with SEEKING system, which activates a ‘can do’ attitude (Panksepp & Biven, 2012).

“She has been shy to sing, so I am building to it gradually and finding creative ways to help her feel at ease with her voice. This has included things like expressing voice sound effects along with physical games. Here the focus is on the physical activity rather than feeling self-conscious about the voice.” (Child A)

Actively promoting the SEEKING system can help to alleviate negative emotions, such as fear (Blackburn et al, 1992; Salamone, 1994).
Discussion

Theme 2. Importance of Play, Playfulness and Co-creation

I aimed to create an enriched environment, with sensory items to utilise as props, to attract interest and encourage imagination through play, playfulness and curiosity (Gregoire & Kaufman, 2016)

These sessions often followed a co-production model, led by the needs and interests of the child, encouraging them to become active agents in their own creations (Cahn, 2004)

‘She seems a little more focussed and calm. We did a very freeing voice warm up in session 8, which I encouraged her take the lead more on now that she knows some of the exercises.’ (Child A)
Discussion

Theme 2. Importance of Play, Playfulness and Co-creation
Discussion

Theme 3. Relational and Empathy Skills – Creating a Nurturing Environment of Safety and Acceptance

Dan Hughes’ PACE model for trauma informed working (Hughes & Golding, 2012) *Acceptance, Curiosity and Empathy* has a significant role in the fostering of positive relationships and attachment.

All five of the children reported that they felt listened to and heard in the sessions, either a lot or extremely.

They also all reported feeling safe, one saying they felt a little bit safe and others saying a lot or it’s their safest place.

Child E described ‘*sometimes I feel more relaxed here than anywhere else*’ and Child B reported that she enjoyed ‘*spending time with you.*’
Discussion

Theme 3. Relational and Empathy Skills – Creating a Nurturing Environment of Safety and Acceptance

Through **empathetic attunement** *(Finlay, 2015)*, I was able to ‘express the quality of feeling of a shared affect state, without imitating the exact behavioural expression of the inner state’ *(Stern, 1985)*

I used my voice and body to match the energy of the child, showing empathy, alignment and acceptance.

‘Crossing the transaction’ *(Sunderland, 2016)*
Discussion

Theme 3. Relational and Empathy Skills – Creating a Nurturing Environment of Safety and Acceptance

- Importance of **regulating activity** and offering tools for self-regulation (*Finlay, 2015*)

- **Touch** is an important way to regulate (*Panskepp, Bean et al, 1980; Matthiesen et al, 2001*)

- **Building body (somatic) awareness** (*de Kolk, 2015*)

- **Repetition and Reward** (*Perry, 2006*)

‘After doing some breathing exercises, using feathers, she was much calmer.’ (Child C)
Conclusions

It’s never too late to build new neural pathways and to strengthen the frontal cortex of the brain – ‘Where attention goes, neural firing flows and neural connection grows’ (Siegel, 2018; Doidge, 2016)

Trauma Informed approaches can support the change of brain chemistry and even brain structure (neuroplasticity/neurogenesis) – Fuchs & Flugge, 2014; Doidge N, 2016)
Conclusions

• Mental Health challenges are on the rise with an estimated **one in 8 children** and young people experiencing at least one mental health disorder (*Brodie et al, 2017*).

• **Singing and Voice work can be effective** as both a means of expressing emotions and inner states and as a way of regulating and boosting well-being (*Welch, 2011*).

• Children with ACEs and low protective factors need a **different approach** to traditional singing lessons or choir.

• The **emerging principles** upon which to base a Trauma and Mental Health Informed approach to one to one singing with children and young people are;
  
  • **Empathy and Relational Skills** (Empathic Attunement – *Finlay, 2015*).
  • **Adaptive and Flexible Vocal Pedagogy**
  • **Building in Repetition and Rhythm**
  • **Playfulness and Play with Reward**
  • **Co-creation and Relevant to the individual child/young person**
  • **Multi-modal and focussed on body awareness/connection**
  • **Non-judgmental, Accepting and Respectful**
Learning and Recommendations

• **Enhanced my practice** through greater understanding
• Using *Shon’s reflection in action* (1983) and *Kolb’s reflective cycle* (1984), I built on the learning throughout the process
• **Sessions have continued** with 3 of the children due to securing additional funding
• I am delivering a workshop at the **Child Centre for Mental Health** in London and have delivered workshops at conferences in the South West
• I am now delivering group singing sessions in the new **residential adolescent mental health unit in Cornwall**
• This was a **small scale study** with encouraging findings, but with its limitations
• I would like to conduct a **larger scale research project including working with adults** and will seek funds and partners to make this happen
References

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Sessions have really helped me feel better. I've started spending more time at home and enjoying lessons. My parents are really proud of me. Sometimes I feel sad, but just using my voice helps me feel better. I really want to learn more.